

What is claimed is:

1. A method of screening for a compound for promoting wakefulness in a mammal, comprising:

(a) providing a compound that is a PrRP receptor agonist; and

(b) determining the ability of said compound to promote wakefulness.

2. The method of claim 1, wherein step (a) comprises contacting a PrRP receptor with one or more candidate compounds under conditions wherein PrRP promotes a predetermined signal, identifying a compound that promotes said predetermined signal, and providing said compound.

3. The method of claim 2, wherein said predetermined signal is selected from the group consisting of calcium ion mobilization and arachadonic acid metabolite release.

4. The method of claim 2, wherein said PrRP receptor is GPR10.

5. The method of claim 2, wherein said PrRP receptor is contacted with greater than about 100 candidate compounds.

6. The method of claim 2, wherein said PrRP receptor is contacted with greater than about 10^5 candidate compounds.

7. The method of claim 1, wherein step (a) comprises contacting a PrRP receptor with one or more candidate compounds under conditions wherein PrRP binds to said PrRP receptor, identifying a compound that binds to said PrRP
5 receptor, and providing said compound.

8. The method of claim 7, wherein said PrRP receptor is GPR10.

9. The method of claim 7, wherein said PrRP receptor is contacted with greater than about 100 candidate
10 compounds.

10. The method of claim 7, wherein said PrRP receptor is contacted with greater than about 10^5 candidate compounds.

11. The method of claim 1, wherein step (a) comprises
15 contacting a PrRP receptor with one or more candidate compounds under conditions wherein PrRP promotes interaction of PrRP receptor with an AMPA receptor associated protein, identifying a compound that promotes said interaction, and providing said compound.

20 12. The method of claim 11, wherein said AMPA receptor associated protein is selected from the group consisting of GRIP, GRIP2 and PICK1.

13. The method of claim 1, wherein the ability of said compound to promote wakefulness is determined by a method
25 selected from the group consisting of EEG measurement, EMG measurement and wake time measurement.

14. The method of claim 1, wherein the ability of said compound to promote wakefulness is determined by administering said compound to a mammal selected from the group consisting of a human, a non-human primate, a rat and
5 a mouse.

15. A method of promoting wakefulness in a mammal, comprising administering to a mammal an effective amount of a PrRP receptor agonist.

16. A method of screening for a compound for promoting
10 sleep in a mammal, comprising:

(a) providing a compound that is a PrRP receptor antagonist; and

(b) determining the ability of said compound to promote sleep.

15 17. The method of claim 16, wherein step (a) comprises contacting a PrRP receptor with one or more candidate compounds under conditions wherein PrRP promotes a predetermined signal, identifying a compound that reduces said predetermined signal, and providing said compound.

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18. The method of claim 17, wherein said contacting is performed in the presence of PrRP.

19. The method of claim 17, wherein said predetermined signal is selected from the group consisting of calcium ion
25 mobilization and arachadonic acid metabolite release.

20. The method of claim 17, wherein said PrRP receptor is GPR10.

21. The method of claim 17, wherein said PrRP receptor is contacted with greater than about 100 candidate compounds.

22. The method of claim 17, wherein said PrRP receptor is contacted with greater than about 10^5 candidate compounds.

23. The method of claim 16, wherein step (a) comprises contacting a PrRP receptor with one or more candidate compounds under conditions wherein PrRP binds to said PrRP receptor, identifying a compound that reduces binding of said PrRP to said PrRP receptor, and providing said compound.

24. The method of claim 23, wherein said contacting is performed in the presence of PrRP.

25. The method of claim 23, wherein said PrRP receptor is GPR10.

26. The method of claim 23, wherein said PrRP receptor is contacted with greater than about 100 candidate compounds.

27. The method of claim 23, wherein said PrRP receptor is contacted with greater than about 10^5 candidate compounds.

28. The method of claim 16, wherein step (a) comprises contacting a PrRP receptor with one or more candidate compounds under conditions wherein PrRP promotes interaction of PrRP receptor with an AMPA receptor associated protein,

identifying a compound that reduces said interaction, and providing said compound.

29. The method of claim 28, wherein said contacting is performed in the presence of PrRP.

5 30. The method of claim 28, wherein said AMPA receptor associated protein is selected from the group consisting of GRIP, GRIP2 and PICK1.

31. The method of claim 16, wherein the ability of
10 said compound to promote sleep is determined by a method selected from the group consisting of EEG measurement, EMG measurement and wake time measurement.

32. The method of claim 16, wherein the ability of
15 said compound to promote sleep is determined by administering said compound to a mammal selected from the group consisting of a human, a non-human primate, a rat and a mouse.

33. A method of promoting sleep in a mammal,
20 comprising administering to a mammal an effective amount of a PrRP receptor antagonist.